



MEMBRANE-BOUND CYTOKINE COMPOSITIONS AND METHODS OF MODULATING AN IMMUNE RESPONSE USING SAME

ABSTRACT

The present invention provides a cellular vaccine having a membrane-bound fusion protein that includes a non-antibody immunomodulatory molecule, Such as GM-cSF operatively fused to a heterologous membrane attachment Non-antibody immunomodulatory molecules useful domain. in the invention include immunostimulatory and immunosuppressive molecules such as cytokines. 10 embodiment, the invention provides a cellular vaccine having a membrane-bound fusion protein that includes a non-antibody immunomodulatory molecule operatively fused to a heterologous membrane attachment domain and, additionally, a disease-associated antigen or immunogenic 15 epitope thereof. Further provided by the invention are methods of modulating an immune response against a disease-associated antigen by administering to an individual a cellular vaccine having a membrane-bound fusion protein that includes a non-antibody immunomodulatory molecule operatively fused to a

heterologous membrane attachment domain.